

BOREHOLE LOG: MW-

PAGE 1 of 3


PROJECT: Electrolux Jefferson
PROJECT NO.: 103-87305
HOLE DEPTH: 65
DEPTH OF SOIL DRILL: 65
DEPTH OF ROCK CORE:
AZIMUTH: N/A PLUNGE:-90

BOREHOLE LOCATION: Jefferson, IA
COORDINATES: N: 3473092.22 E: 4685848.075
GROUND SURFACE ELEV.: 1052.238
DATUM: N/A
START DATE/TIME: 10/21/2015 3:15:00 PM
END DATE/TIME: 10/23/2015 2:00:00 PM

DRILLING METHOD: Roto-Sonic
CORING METHOD: N/A
DRILL RIG: GP24-300RS

Depth Elev.	LITHOLOGY DESCRIPTION	Graphical Log	SAMPLE INFORMATION					Well Graphic	Well Construction Information
			Sample No. or Run No.	Type	PID (ppm)	Soil Rec./Alt. or Core Rec. %	Soil Sample Description Or Discontinuity Data (Depth, Dip, Angle From Core Axis, Type, and Surface Description)		
1050.0	SILTY CLAY, some sand, trace gravel, brown/tan, moist, firm		S1	Sonic	0.0	2.5 / 5	0.0 - 2.0 ft: (ML) TOPSOIL, Organics and CLAYEY SILT, some sand, black, moist, firm 2.0 - 3.0 ft: (CL/ML) SILTY CLAY, some sand, trace gravel, dark brown, moist 3.0 - 5.0 ft: (CL/ML) SILTY CLAY, some sand, trace gravel, brown/tan, moist, firm		0.0 - 38.0 ft: Cement Grout - 2.5 ft of stick-up of the 6" steel protective casing 10-inch diameter borehole advanced to 29 ft and installed 6" diameter casing - grouted to surface and let set for 22 hours.
1045.0	SILTY CLAY, some fine to coarse sand, some gravel up to 1", subangular to subrounded, brown/light brown, soft to firm, moist, some orange mottling and organic streaks throughout		S2	Sonic	0.0	7 / 10	5.0 - 15.0 ft: (CL/ML) SILTY CLAY, some fine to coarse sand, some subangular to subrounded gravel up to 1", brown/light brown, soft to firm, moist, some orange mottling and organic streaks throughout		
1040.0					0.0				
1035.0					0.0		15.0 - 18.0 ft: (CL) SILTY CLAY, some fine to coarse sand, some subangular to subrounded gravel up to 1", brown/light brown, soft to firm, moist, some orange mottling and organic streaks throughout 18.0 - 20.0 ft: (CL) SILTY CLAY and fine to coarse SAND, trace gravel up to 1", grey with brown/orange mottling, soft to firm, wet 20.0 - 24.0 ft: (CL) SILTY CLAY and fine to coarse SAND, trace white and subangular gravel up to 1/2", gray, soft to firm, wet, no brown mottling, till 24.0 - 29.0 ft: (CL) SILTY CLAY and fine to coarse SAND, trace gravel, gray, firm to stiff, moist, till		
1030.0	SILTY CLAY and fine to coarse SAND, trace gravel, gray, firm to stiff, moist, till		S3	Sonic	0.0	15 / 14			

RCRA



555456

RCRA



LITHOLOGY LEGEND



USCS Low Plasticity Silty Clay (CL-ML)
USCS Poorly-graded Gravel (GP)



USCS Silt (ML)
USCS Silty Sand (SM)



USCS Poorly-graded Sand with Silt (SP-SM)
USCS Peat (PT)

DRILLING COMPANY: Cascade Drilling
DRILLER: A. Anderson
GOLDER INSPECTOR: ATK

LOGGED BY: CEM
LOGGED BY DATE: 11/23/2015
CHECKED BY: ATK
CHECKED BY DATE: 12/9/2015



ELLECTROLUX JEFFERSON JEFFERSON LOGS.GPJ GOLDER NH 2011.GDT 12/31/15




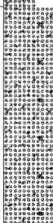

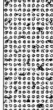









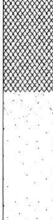

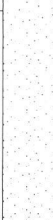


BOREHOLE LOG: MW-66

PAGE 2 of 3

PROJECT: Electrolux Jefferson
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DEPTH OF SOIL DRILL: 65
DEPTH OF ROCK CORE:
AZIMUTH: N/A PLUNGE:-90

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CORING METHOD: N/A
DRILL RIG: GP24-300RS

Depth Elev.	LITHOLOGY DESCRIPTION	Graphical Log	SAMPLE INFORMATION					Soil Sample Description Or Discontinuity Data (Depth, Dip, Angle From Core Axis, Type, and Surface Description)	Well Graphic	Well Construction Information
			Sample No. or Run No.	Type	PID (ppm)	Soil Rec./Alt. or Core Rec. %				
1025.0	SILTY CLAY and fine to coarse SAND, trace gravel, gray, firm to stiff, moist, till		S3	Sonic	0.0	15 / 14				At 29 ft bgs - 4-inch diameter boring advanced through the steel casing and installed a 2-inch PVC well to 55 ft. Total borehole depth is 65.0 ft with the borehole backfilled with bentonite chips from 60.0 - 65.0 ft.
1020.0			S4	Sonic	0.2	5 / 6	29.0 - 33.0 ft: (CL) SILTY CLAY and fine to coarse SAND, trace gravel, gray, firm to stiff, moist, till 33.0 - 35.0 ft: (ML) CLAYEY SILT and fine to coarse SAND, trace subrounded gravel, brown with light gray streaks, stiff, moist Fine to Medium SAND seams at 33.0, 34.2, and 35.0 ft bgs			
	CLAYEY SILT and fine to coarse SAND, trace subrounded gravel, brown with light gray streaks, stiff, moist									
	Fine SAND and SILT, brown, stiff, moist									
1015.0	CLAYEY SILT and SAND, some gravel, light brown/tan, stiff, moist									
	GRAVEL, up to 4 inches, subrounded, granitic, brown/tan, reddish quartz				0.1					
	CLAYEY SILT and fine to coarse SAND, some gravel up to 1/2", light brown, stiff, moist, with brown/orange mottling in horizontal/subhorizontal seams of fine sand, sandier layers are ~4" at 39 ft and 40.5 ft		S5	Sonic		10 / 10	35.0 - 36.0 ft: (SP) fine SAND and SILT, brown, stiff, moist 36.0 - 37.5 ft: (ML) CLAYEY SILT and SAND, some gravel, light brown/tan, stiff, moist 37.5 - 37.8 ft: (GP) GRAVEL, up to 4 inches, subrounded, granitic, brown/tan, reddish quartz 37.8 - 41.0 ft: (ML) CLAYEY SILT and fine to coarse SAND, some gravel up to 1/2", light brown, stiff, moist, with brown/orange mottling (iron stains) in horizontal/subhorizontal seams of fine sand, sandier layers are ~4" at 39 ft and 40.5 ft 41.0 - 45.0 ft: (CL) SILTY CLAY, some sand, trace gravel, tan/light brown, very stiff/hard, moist/dry, some horizontal and vertical sand seams with orange mottling			38.0 - 42.5 ft: Bentonite Chips
1010.0	SILTY CLAY, some sand, trace gravel, tan/light brown, very stiff/hard, moist/dry, some horizontal and vertical sand seams with orange mottling				0.0					42.5 - 43.0 ft: Fine Sand - 0.5 bag used 43.0 - 60.0 ft: #40 Red Flint Sand - 4.5 bags used
1005.0			S6	Sonic	0.0	12 / 10				45.0 - 55.0 ft: 2" diameter, 0.01" - slotted PVC pipe
	SILTY SAND (mostly fine sand), trace gravel, trace clay,									

LITHOLOGY LEGEND



USCS Low Plasticity Silty Clay (CL-ML)
USCS Poorly-graded Gravel (GP)



USCS Silt (ML)
USCS Silty Sand (SM)



USCS Poorly-graded Sand with Silt (SP-SM)
USCS Peat (PT)

DRILLING COMPANY: Cascade Drilling
DRILLER: A. Anderson
GOLDER INSPECTOR: ATK

LOGGED BY: CEM
LOGGED BY DATE: 11/23/2015
CHECKED BY: ATK
CHECKED BY DATE: 12/9/2015



JEFFERSON LOGS.GPJ GOLDER NH 2011.GDT 12/31/15




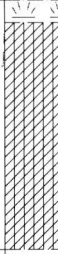
BOREHOLE LOG: MW-

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PROJECT NO.: 103-87305
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DEPTH OF SOIL DRILL: 65
DEPTH OF ROCK CORE:
AZIMUTH: N/A PLUNGE:-90

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DRILLING METHOD: Roto-Sonic
CORING METHOD: N/A
DRILL RIG: GP24-300RS

Depth Elev.	LITHOLOGY DESCRIPTION	Graphical Log	SAMPLE INFORMATION					Soil Sample Description Or Discontinuity Data (Depth, Dip, Angle From Core Axis, Type, and Surface Description)	Well Graphic	Well Construction Information
			Sample No. or Run No.	Type	PID (ppm)	Soil Rec./Att. or Core Rec. %				
1000.0	tan/brown, non-cohesive, moist, dense SILTY CLAY and SAND, some gravel, gray/brown with orange mottling, very stiff, moist Fine SILTY SAND, poor sorting, light brown, moist, compact CLAYEY SILT and fine to coarse SAND, trace gravel, light brown to gray with orange/brown mottling, very stiff, moist, occasional ~1/4" sand lenses SILTY SAND, trace clay, light brown, moist, compact CLAYEY SILT and fine to coarse SAND, trace gravel, light brown to gray with orange/brown mottling, very stiff, moist, occasional ~1/4" sand lenses SILTY CLAY and fine to coarse SAND, trace gravel, trace to some organics (increasing with depth), gray-brown with orange/brown mottling, very stiff to soft, moist		S6	Sonic	0.0	12 / 10		45.0 - 49.0 ft: (CL) SILTY CLAY, some sand, trace gravel, tan/light brown, hard, moist/dry, some horizontal and vertical sand seams with orange mottling 49.0 - 49.75 ft: (SM) SILTY SAND (mostly fine sand), trace gravel, trace clay, tan/brown, non-cohesive, moist, dense 49.75 - 51.25 ft: (CL) SILTY CLAY and SAND, some gravel, gray/brown with orange mottling, very stiff, moist 51.25 - 51.5 ft: (SM) fine SILTY SAND, poor sorting, light brown, moist, compact 51.5 - 54.25 ft: (ML) CLAYEY SILT and fine to coarse SAND, trace gravel, light brown to gray with orange/brown mottling, very stiff, moist, occasional ~1/4" sand lenses 54.25 - 54.5 ft: (SM) SILTY SAND, trace clay, light brown, moist, compact 54.5 - 55.0 ft: (ML) CLAYEY SILT and fine to coarse SAND, trace gravel, light brown to gray with orange/brown mottling, very stiff, moist, occasional ~1/4" sand lenses 55.0 - 57.5 ft: (CL) SILTY CLAY and fine to coarse SAND, trace gravel, gray-brown with orange/brown mottling, very stiff, moist 57.5 - 60.5 ft: (CL) SILTY CLAY, some fine to coarse sand, trace gravel, trace to some organics (increasing with depth), gray to dark brown and black organics, soft, moist 60.5 - 60.9 ft: (PT) PEAT, ORGANICS and SILTY CLAY, some sand, black/dark brown, soft, wet 60.9 - 65.0 ft: (CL) SILTY CLAY, some sand, trace gravel, gray to dark gray, stiff, moist, trace organic streaks, black area at 64 ft bgs (weathered shale?)		43.0 - 60.0 ft: #40 Red Flint Sand - 4.5 bags used 45.0 - 55.0 ft: 2" diameter, 0.01" - slotted PVC pipe
995.0			S7	Sonic	0.0	12 / 10				60.0 - 65.0 ft: Backfilled with Bentonite Chips - 1/2 of 50# bag used
990.0	PEAT, ORGANICS and SILTY CLAY, some sand, black/dark brown, soft, wet SILTY CLAY, some sand, trace gravel, gray to dark gray, stiff, moist, trace organic streaks, black area at 64 ft bgs (weathered shale?)				0.0					
985.0										
980.0										

LITHOLOGY LEGEND



USCS Low Plasticity Silty Clay (CL-ML)
USCS Poorly-graded Gravel (GP)



USCS Silt (ML)
USCS Silty Sand (SM)



USCS Poorly-graded Sand with Silt (SP-SM)
USCS Peat (PT)

DRILLING COMPANY: Cascade Drilling
DRILLER: A. Anderson
GOLDER INSPECTOR: ATK

LOGGED BY: CEM
LOGGED BY DATE: 11/23/2015
CHECKED BY: ATK
CHECKED BY DATE: 12/9/2015



ELLECTROLUX JEFFERSON JEFFERSON LOGS.GPJ GOLDER.NH 12/31/15






BOREHOLE LOG: MW-67

PAGE 1 of 5

PROJECT: Electrolux Jefferson
PROJECT NO.: 103-87305
HOLE DEPTH: 105
DEPTH OF SOIL DRILL: 105
DEPTH OF ROCK CORE:
AZIMUTH: N/A PLUNGE:-90

BOREHOLE LOCATION: Jefferson, IA
COORDINATES: N: 3472943.527 E: 4685646.723
GROUND SURFACE ELEV.: 1055.084
DATUM: N/A
START DATE/TIME: 10/20/2015 9:35:00 AM
END DATE/TIME: 10/22/2015 6:20:00 PM

DRILLING METHOD: Roto-Sonic
CORING METHOD: N/A
DRILL RIG: GP24-300RS

Depth Elev.	LITHOLOGY DESCRIPTION	Graphical Log	SAMPLE INFORMATION					Well Graphic	Well Construction Information
			Sample No. or Run No.	Type	PID (ppm)	Soil Rec./Att. or Core Rec. %	Soil Sample Description or Discontinuity Data (Depth, Dip, Angle From Core Axis, Type, and Surface Description)		
1055.0	TOPSOIL, ORGANICS, some sand, some silt, black to dark brown, moist 1.0 - 2.0 ft: (SW) fine to coarse SAND and SILT, trace gravel, dark brown, moist 2.0 - 4.0 ft: (SW) fine to coarse SAND, some silt, brown, moist, compact 4.0 - 5.0 ft: (SP) fine to medium SAND, trace silt, brown, moist to wet, loose		S1	Sonic	0.1	3.5 / 5	0.0 - 1.0 ft: TOPSOIL, ORGANICS, some sand, some silt, black to dark brown, moist 1.0 - 2.0 ft: (SW) fine to coarse SAND and SILT, trace gravel, dark brown, moist 2.0 - 4.0 ft: (SW) fine to coarse SAND, some silt, brown, moist, compact 4.0 - 5.0 ft: (SP) fine to medium SAND, trace silt, brown, moist to wet, loose		0.0 - 83.0 ft: Cement Grout - 2.5 ft of stick-up of the 6" steel protective casing 10-inch diameter borehole advanced to 80 ft and installed 6" diameter casing - grouted to surface and let set for 22 hours.
1050.0	fine to coarse SAND and SILT, trace gravel, dark brown, moist fine to coarse SAND, some silt, brown, moist, compact fine to medium SAND, trace silt, brown, moist to wet, loose fine to coarse SAND, trace silt, brown, wet fine to coarse SAND, trace subangular gravel up to 1/2", brown to orange, wet, loose fine to coarse SAND, trace silt, brown with tan mottling, loose		S2	Sonic	0.1	3 / 5	5.0 - 6.0 ft: (SW) fine to coarse SAND, trace silt, brown, wet 6.0 - 8.5 ft: (SW) fine to coarse SAND, trace subangular gravel up to 1/2", brown to orange, wet, loose, trace tan sand lenses at ~7.5 ft bgs 8.5 - 11.0 ft: (SW) fine to coarse SAND, trace silt, brown with tan mottling, loose		
1045.0	fine to coarse SAND, trace subangular gravel up to 1/4", brown, wet, loose		S3	Sonic	0.4	4 / 5	11.0 - 15.0 ft: (SW) fine to coarse SAND, trace subangular gravel up to 1/4", brown, wet, loose Fine to coarse orange sand lense @ 14 ft. bgs		
1040.0	SILTY CLAY and SAND, trace gravel, brown, firm, wet SILTY CLAY and fine to coarse SAND, trace white to brown subrounded gravel up to 1", dark gray, stiff, dry, till		S4	Sonic	0.4	7 / 7	15.0 - 16.0 ft: (CL-ML) SILTY CLAY and SAND, trace gravel, gray/brown, firm, wet 16.0 - 35.0 ft: (CL-ML) SILTY CLAY and fine to coarse SAND, trace white to brown subrounded gravel up to 1", dark gray, stiff, dry, till		
1035.0			S5	Sonic	0.3	5 / 5			

LITHOLOGY LEGEND



USCS Sandy Silt (MLS)
USCS Poorly-graded Sand (SP)



USCS Well-graded Sand with Silt (SW-SM)
USCS Low Plasticity Silty Clay (CL-ML)



USCS Well-graded Sand (SW)
USCS Low Plasticity Sandy Clay (CLs)

DRILLING COMPANY: Cascade Drilling
DRILLER: A. Anderson

GOLDER INSPECTOR: ATK

LOGGED BY: CEM
LOGGED BY DATE: 11/24/2015
CHECKED BY: ATK
CHECKED BY DATE: 12/9/2015



ELLECTROLUX JEFFERSON JEFFERSON LOGS.GPJ GOLDER NH 2011.GDT 12/31/15


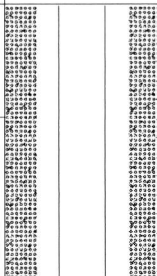
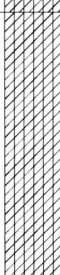
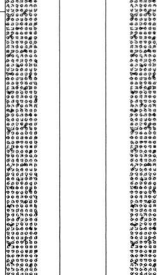

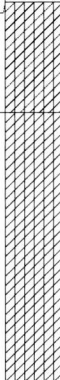
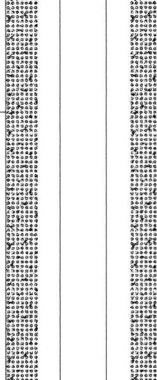
BOREHOLE LOG: MW

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PROJECT: Electrolux Jefferson
PROJECT NO.: 103-87305
HOLE DEPTH: 105
DEPTH OF SOIL DRILL: 105
DEPTH OF ROCK CORE:
AZIMUTH: N/A PLUNGE:-90

BOREHOLE LOCATION: Jefferson, IA
COORDINATES: N: 3472943.527 E: 4685646.723
GROUND SURFACE ELEV.: 1055.084
DATUM: N/A
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CORING METHOD: N/A
DRILL RIG: GP24-300RS

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1030.0	SILTY CLAY and fine to coarse SAND, trace white to brown subrounded gravel up to 1", dark gray, stiff, dry, till		S5	Sonic		5 / 5			0.0 - 83.0 ft: Cement Grout - 2.5 ft of stick-up of the 6" steel protective casing
1025.0			S6	Sonic	0.2	8 / 8			10-inch diameter borehole advanced to 80 ft and installed 6" diameter casing - grouted to surface and let set for 22 hours.
1020.0	SILTY CLAY, trace sand and gravel, dark gray transitioning to gray/olive at 40 ft bgs, stiff to very stiff		S7	Sonic	0.2		35.0 - 40.0 ft: (CL-ML) SILTY CLAY, trace sand and gravel, dark gray transitioning to gray/olive at 40 ft bgs, stiff to very stiff Clay expands during core barrel extrusion 40.0 - 42.0 ft: (CL-ML) SILTY CLAY fine to coarse SAND, trace gravel, olive to yellow-brown, moist, dense, till 42.0 - 43.0 ft: (SW) fine to coarse SAND, trace gravel up to 1/2", trace silt, yellow-brown, wet, loose 43.0 - 45.0 ft: (CL-ML) SILTY CLAY fine to coarse SAND, trace gravel, olive to yellow-brown, moist, dense, till		
1015.0	SILTY CLAY fine to coarse SAND, trace gravel, olive to yellow-brown, moist, dense, till				11.5 / 10				
	fine to coarse SAND, trace gravel up to 1/2", trace silt, yellow-brown, wet, loose				0.2		1" thick sand lense at 43.5 ft bgs		
	SILTY CLAY fine to coarse SAND, trace gravel, olive to yellow-brown, moist, dense, till								
1010.0	SILTY CLAY, some fine to coase SAND, trace subrounded/subangular gravel, gray/brown to orange oxidized layers with mottling, very stiff to hard, moist, till		S8	Sonic	0.7	11 / 10	45.0 - 58.0 ft: (CL-ML) SILTY CLAY, some fine to coase SAND, trace subrounded/subangular gravel, gray/brown to orange oxidized layers with mottling, very stiff to hard, moist, till		

LITHOLOGY LEGEND



USCS Sandy Silt (MLS)
USCS Poorly-graded Sand (SP)



USCS Well-graded Sand with Silt (SW-SM)
USCS Low Plasticity Silty Clay (CL-ML)



USCS Well-graded Sand (SW)
USCS Low Plasticity Sandy Clay (CLS)

DRILLING COMPANY: Cascade Drilling
DRILLER: A. Anderson
GOLDER INSPECTOR: ATK

LOGGED BY: CEM
LOGGED BY DATE: 11/24/2015
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BOREHOLE LOG: MW-67

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1005.0	SILTY CLAY, some fine to coarse SAND, trace subrounded/subangular gravel, gray/brown to orange oxidized layers with mottling, very stiff to hard, moist, till		S8	Sonic	0.8	11 / 10			0.0 - 83.0 ft: Cement Grout - 2.5 ft of stick-up of the 6" steel protective casing 10-inch diameter borehole advanced to 80 ft and installed 6" diameter casing - grouted to surface and let set for 22 hours.
1000.0									
	SILTY CLAY, trace sand, trace gravel, trace organic streaks, gray to dark gray with orange/brown mottling, stiff, moist, till		S9	Sonic	0.5	10 / 10	58.0 - 60.0 ft: (CL-ML) SILTY CLAY, trace sand, trace gravel, trace organic streaks, gray to dark gray with orange/brown mottling, stiff, moist 60.0 - 64.5 ft: (CL-ML) SILTY CLAY, trace sand, trace gravel, gray to brown clay with brown mottling, very stiff, moist, till 64.5 - 65.0 ft: (CL-ML) SILTY CLAY and coarse SAND, trace white to tan gravel, gray, very stiff, moist		
995.0									
					0.3				
990.0	SILTY CLAY and coarse SAND, trace white to tan gravel, gray, very stiff, moist SANDY SILTY CLAY, fine to coarse sand, trace gravel, gray to dark gray, very stiff to hard, moist								
			S10	Sonic		6 / 5	65.0 - 71.0 ft: (CLS) SANDY SILTY CLAY, fine to coarse sand, trace gravel, gray to dark gray, very stiff to hard, moist		
						0.3			
985.0									
	fine to coarse SAND and SILTY CLAY, ~1" layer of sand, softer SANDY SILTY CLAY, fine to coarse sand, trace gravel, gray, very stiff to hard		S11	Sonic		6 / 5			
	fine to medium SAND, some silt, gray/brown, wet, loose				0.2				

LITHOLOGY LEGEND



USCS Sandy Silt (MLS)
USCS Poorly-graded Sand (SP)



USCS Well-graded Sand with Silt (SW-SM)
USCS Low Plasticity Silty Clay (CL-ML)



USCS Well-graded Sand (SW)
USCS Low Plasticity Sandy Clay (CLS)

DRILLING COMPANY: Cascade Drilling
DRILLER: A. Anderson

GOLDER INSPECTOR: ATK

LOGGED BY: CEM
LOGGED BY DATE: 11/24/2015
CHECKED BY: ATK
CHECKED BY DATE: 12/9/2015



ELLECTROLUX JEFFERSON JEFFERSON LOGS.GPJ GOLDER NH 2011.GDT 12/31/15

BOREHOLE LOG: MW-

PAGE 4 of 5

PROJECT: Electrolux Jefferson
PROJECT NO.: 103-87305
HOLE DEPTH: 105
DEPTH OF SOIL DRILL: 105
DEPTH OF ROCK CORE:
AZIMUTH: N/A PLUNGE:-90

BOREHOLE LOCATION: Jefferson, IA
COORDINATES: N: 3472943.527 E: 4685646.723
GROUND SURFACE ELEV.: 1055.084
DATUM: N/A
START DATE/TIME: 10/20/2015 9:35:00 AM
END DATE/TIME: 10/22/2015 6:20:00 PM

DRILLING METHOD: Roto-Sonic
CORING METHOD: N/A
DRILL RIG: GP24-300RS

Depth Elev.	LITHOLOGY DESCRIPTION	Graphical Log	SAMPLE INFORMATION					Soil Sample Description or Discontinuity Data (Depth, Dip, Angle From Core Axis, Type, and Surface Description)	Well Graphic	Well Construction Information
			Sample No. or Run No.	Type	PID (ppm)	Soil Rec./Alt. or Core Rec. %				
980.0	SANDY SILTY CLAY, fine to coarse sand, trace subrounded to subangular gravel, gray to brown with mottling, very stiff, moist		S12	Sonic		6 / 5		71.0 - 71.1 ft: (SW-SC) fine to coarse SAND and SILTY CLAY, ~1" layer of sand, softer 71.1 - 73.5 ft: (CLS) SANDY SILTY CLAY, fine to coarse sand, trace gravel, gray, very stiff to hard 73.5 - 74.0 ft: (SP) fine to medium SAND, some silt, gray/brown, wet, loose 74.0 - 80.0 ft: (CLS) SANDY SILTY CLAY, fine to coarse sand, trace subrounded to subangular gravel, gray to brown with mottling, very stiff, moist		
975.0	SILTY CLAY and SAND, trace gravel, gray, soft, moist		S13	Sonic	0.3	3 / 5		80.0 - 81.5 ft: (CL-ML) SILTY CLAY and SAND, trace gravel, gray, soft, moist 81.5 - 84.5 ft: (GP) GRAVEL (possible boulder - hard drilling), angular pieces up to 4", gray granite/diorite composed of quartz, feldspar, and amphiboles, subangular to angular gravel between 1/4" to 2", some sand, light gray, dry (hot from drilling), loose 84.5 - 87.0 ft: (CL-ML) SILTY CLAY, some sand, trace gravel, dark brown with light brown/orange laminations/mottling along sandier layers, very stiff to hard, dry		At 80 ft bgs - 4-inch diameter boring advanced through the steel casing and installed a 2-inch PVC well to 97.0 ft. Total borehole depth is 105.0 ft. 83.0 - 85.0 ft: Bentonite Seal 85.0 - 85.5 ft: Fine Sand 85.5 - 105.0 ft: #40 Red Flint Filter Sand 87.0 - 97.0 ft: 2" diameter, 0.01"-slotted PVC pipe.
	GRAVEL (possible boulder - hard drilling), angular pieces up to 4", gray granite/diorite composed of quartz, feldspar, and amphiboles, subangular to angular gravel between 1/4" to 2", some sand, light gray, dry (hot from drilling), loose				0.2			87.0 - 87.5 ft: (CL-ML) CLAYEY SILT, some fine sand, vertical orange mottling, light brown with some black streaks, very stiff, dry		
970.0	SILTY CLAY, some sand, trace gravel, dark brown with light brown/orange laminations/mottling along sandier layers, very stiff to hard, dry							87.5 - 89.5 ft: (CL-ML) CLAYEY SILT and fine SAND, orange mottling, stiff, non-plastic, dry		
	CLAYEY SILT, some fine sand, vertical orange mottling, light brown with some black streaks, very stiff, dry				0.3			89.5 - 90.5 ft: (SP-SM) fine SAND and SILT, some silt, orange brown and black layering, 2" thick orange/brown layer, black fine sand below		
965.0	fine SAND and SILT, some silt, orange brown and black layering, 2" thick orange/brown layer, black fine sand below		S14	Sonic		9 / 10		90.5 - 90.75 ft: (SP-SM) fine SAND and SILT, light gray/tan, some black streaks		
	fine to coarse SAND, tan/light brown, moist, loose							90.75 - 91.0 ft: (SP) fine to coarse SAND, tan/light brown, moist, loose		
	fine SAND, some silt, tan/gray, compact, moist				0.2			91.0 - 91.25 ft: (SP) fine SAND, some silt, tan/gray, compact, moist		
	fine to coarse SAND with the mode being medium sand, slightly coarser with depth, trace gravel up to 1/2", trace silt, light brown, wet, loose				0.2			91.25 - 96.5 ft: (SW) fine to coarse SAND with the mode being medium sand, slightly coarser with depth, trace gravel up to 1/2", trace silt, light brown, wet, loose		
960.0										
958	SAND and elongate subangular GRAVEL up to 3", dark brown, wet, loose		S15	Sonic		10 / 10				
	SILTY CLAY, some sand, trace gravel, gray/brown with abundant orange/brown mottling, some pockets of tan silt/sand (weathered sandstone gravel?), very stiff, moist, till				0.1					

LITHOLOGY LEGEND



USCS Sandy Silt (MLS)
USCS Poorly-graded Sand (SP)



USCS Well-graded Sand with Silt (SW-SM)
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USCS Well-graded Sand (SW)
USCS Low Plasticity Silty Clay (CLS)

DRILLING COMPANY: Cascade Drilling
DRILLER: A. Anderson

GOLDER INSPECTOR: ATK

LOGGED BY: CEM
LOGGED BY DATE: 11/24/2015
CHECKED BY: ATK
CHECKED BY DATE: 12/9/2015



ELLECTROLUX JEFFERSON JEFFERSON LOGS.GPJ GOLDER.NH 2011.GDT 12/31/15



BOREHOLE LOG: MW-67

PAGE 5 of 5

PROJECT: Electrolux Jefferson
PROJECT NO.: 103-87305
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DEPTH OF SOIL DRILL: 105
DEPTH OF ROCK CORE:
AZIMUTH: N/A PLUNGE:-90

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DRILLING METHOD: Roto-Sonic
CORING METHOD: N/A
DRILL RIG: GP24-300RS

Depth Elev.	LITHOLOGY DESCRIPTION	Graphical Log	SAMPLE INFORMATION					Soil Sample Description Or Discontinuity Data (Depth, Dip, Angle From Core Axis, Type, and Surface Description)	Well Graphic	Well Construction Information
			Sample No. or Run No.	Type	PID (ppm)	Soil Rec./Att. or Core Rec. %				
955.0	SILTY CLAY, some sand, trace gravel, gray/brown with abundant orange/brown mottling, some pockets of tan silt/sand (weathered sandstone gravel?), very stiff, moist, till		S15	Sonic	0.1	10 / 10	96.5 - 97.0 ft: (SWG) SAND and elongate subangular GRAVEL up to 3", dark brown, wet, loose 97.0 - 99.0 ft: (CL-ML) SILTY CLAY, some sand, trace gravel, gray/brown with abundant orange/brown mottling, some pockets of tan silt/sand (weathered sandstone gravel?), very stiff, moist, till 99.0 - 105.0 ft: (CL-ML) SILTY CLAY, some sand, trace gravel, up to 2" pockets of tan fine sand (not layered - weathered sandstone gravel?), dark gray, very stiff, dry			
950.0							End of Boring at 105.0 ft bgs			
945.0										
940.0										
935.0										

LITHOLOGY LEGEND



USCS Sandy Silt (MLS)
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DRILLING COMPANY: Cascade Drilling
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